REMARKS

A preliminary amendment is filed herewith to clarify the invention of this application. No new matter has been introduced.

The term "nylon" has been replaced in claim 4 by "polyamide".

The units expressed in degrees Fahrenheit throughout the present application including the claims and figure 2 have been replaced by the appropriate SI units in degrees Centigrade. The present expressions have been retained in parenthesis after the replacement expressions.

Claim 18 has been amended to correct a clerical error. It has been specified now that the curing time is not more than ten minutes.

An introduction to the VICAT melting point has been introduced into the background of the invention with reference to the appropriate handbook (new page 1a of specification).

The term "immediately" in claims 12 and 15 has been replaced by "quickly".

Figure 2 has been amended and the abscissa axis has been completed. The corresponding temperature values in degrees Centigrade has been expressed.

The applicant submits that the amended claims are patentable over the prior art. A supplemental information disclosure statement is filed herewith.

The applicant submits that the claims of the present application as amended clearly represent an inventive step over the prior art with particular reference to U.S. patent 6,214,421 (Pidzarko).

The application of the adhesion promoter as recited in the claims of the present application is not equivalent and represents an inventive step over the step of applying moisture as recited in Pidzarko. The promoter as recited in the present claims is for the adhesion of the powder to the substrate activated during the curing process which upon final cure, will ensure a final bonding of the powder to the substrate. One of the essential elements of the present process is the preheating of the part to a certain temperature and this time and temperature depends upon the mass of the substrate.

The present process provides a method for attracting powders to the substrate in a uniform fashion to cover the entire surface of the substrate via thermal attraction. There would

be no such attraction with the application of moisture other than some minor adherence when the substrate is in a horizontal plain. The present process achieves a flow or a gel at the time of application which prevents it from forming sags due to the influence of gravity. This is not found in Pidzarko. The moisture or lack of adhesion would promote fat edges as a combination of water and powder would seek the lowest point based on gravity and flow characteristics.

Pidzarko shows the application of its process to flat plain objects being placed on a conveyor such as wood doors. Again, Pidzarko relies on gravity for the adhesion of the moisture. It would be impossible to use this method to do a vertically placed substrate nor to a three-dimensional substrate as there would not be enough adhesion through the application of the moisture. The present process as per the claims of this application involve the application of heat for attraction and means the powders gel on impact holding them in place for cure and prevents any undue flow or sagging of materials prior to cure.

The present process is directed, *inter alia*, to polyamide substrate as recited in claim 4. This family of products is extremely susceptible to moisture and thus any moisture in the part would be absorbed and create what is known as "popping". Thus the Pidzarko method is in direct contradiction to the processing of plastic materials such as polyamides.

The method of Pidzarko is a direct cline of site application and does not promote any wrap. Wrap is the ability to coat the back of the substrate using a line of site application method. The application of moisture as disclosed in Pidzarko is more for the purposes of protecting the wood substrate from overly drying out during the curing process and less for adhesion.

The thermal adhesion process as recited in the present claims promotes wrap as the part is a free standing, vertically placed part which experiences an incredible wrap on the part solely through the thermal attraction process. If one were to use the Pidzarko processing approach by laying the materials on the conveyors, there would be no or very little chance of the materials wrapping the part.

The present process does not use water as this will promote popping. Popping is when the gasses are released forming a bubble or a bump under the coating. The coating does not allow the gasses to escape as they are trapped thus forming an irregularity in the coating. The powders are not designed to be mixed with water. Thus, Pidzarko is in direct contradiction to all the steps of the process of the present application. If water were used as in Pidzarko, the film will not promote adhesion on polyamide surfaces or substrates as there will be gasses formed between the powder and the substrate almost forming a pocket.

The process as recited in the claims of the present application clearly represent a significant and inventive step over Pidzarko. In Pidzarko, there is no control over the build of the film as the attraction disclosed in Pidzarko is passive rather than the true attraction as recited in the present claims which involves the thermal process. This is clearly because Pidzarko deals with the application on flat panels and Pidzarko allows gravity to do the work with the powder.

The powder merely falls towards the ground and lands on the flat surface of the substrate. If for example these panels were positioned in an upright manner and three dimensional, then the film build would be totally inconsistent and produce an unacceptable appearance. Thus, the process of the present application clearly produces an improved product and represents an inventive step over Pidzarko.

The present claims also are patentable in view of GB 2,024,658 (Shaw).

The adhesion promoter as recited in the present claims is not used for the purposes of attraction but potentially acts as chemical bonding promoter of the powder to the substrate which is activated during the cure cycle.

Shaw relies on the application of a wet paint which may be or may be not conductive. It relies on the horizontal application requiring gravity as the main attraction method. The polyester resin of Shaw is completely dissimilar to the adhesion promoter as recited in the claims of the present application. Shaw requires an initial coat to be applied by means of a liquid roller and it must be sanded in a secondary operation. Shaw relies solely on electrostatic attraction whereas the claims of the present application clearly indicate that the attraction is by thermal means. As a result, the adhesion promoter of the claims of the present application is chemical bonding in nature and not meant as a means of attraction as required by Shaw.

The applicant submits that the present claims also define a patentable invention in view of U.S. patent 6,080,310 (Bosler *et al*). Bosler *et al* does not relate to a non-conductive surface such as a plastic as required in the claims of the present application. The Bosler *et al* method using a fluidizing bed which is a bed of powder in which the part is dipped but the part must be conductive. This clearly distinguishes Bosler *et al* from the present invention.

The claims also define patentability over EP 1092479 (White *et al*). White *et al* discloses the coating of a heated sensitive substrate being a plastic or metal and relies solely on electrostatic attraction and not thermal attraction as required by the claims of the present application. Thus, the part must be made conductive prior to the powders being applied which is completely different than the process as recited in the claims. White *et al* discloses a two-step process for the purposes of insulting the part to avoid damage to the part. The process of the present application does not require the two-step process as there is no need for a protective or insulative layer of the part. The finish coat can be applied in one application step. As indicated, White *et al* requires the part to be conductive which again removes it from the scope of the claims of the present application.

With respect to U.S. patent 6,531,189 (Blatter *et al*), this patent deals solely with the ability to cure a lacquer finish and the technology makeup of the lacquer. It is noted that the process, while it is stated that it is applicable for non-conductive surfaces, relies solely on electrostatic attraction and not thermal attraction. Thus, the substrate must be conductive or a conductive base coat must be present.

Similarly, EP 1277522 (Remmert *et al*) deals solely with the application of powder on metals. There is no application to a non-conductive surface as required by claims of this application.

Favourable consideration is requested.

Respectfully submitted,

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PLH/las
Encl.
Ret. Ack. Card
New Disclosure page 1a
Amended disclosure pages 11, 12, 13, 14 and 16
Amended drawing page – figure 2
Supplemental Information Disclosure Statement (21 pages)